EXHIBIT A

SCOPE OF SERVICES
FLOW MONITORING, I/I, SSES, AND REHABILITATION PROGRAM

BACKGROUND AND OBJECTIVES

The City of Durham (City) intends to perform sanitary sewer evaluation surveys (SSES) and rehabilitation in, initially, priority sub-basins as Phase 1, followed by numerous other sub-basins throughout the City, to reduce infiltration and inflow (I/I) and correct structural, hydraulic capacity, operational, and maintenance deficiencies. The first step in this program is to perform temporary flow monitoring at a sub-basin level and determine which of those sub-basins should be further evaluated using additional SSES investigations (such as smoke testing, manhole inspections, Electroscan, CCTV, etc.) and rehabilitation. Flow monitoring analysis is best performed in the winter and early spring when groundwater levels are highest. The City therefore intends to install flow meters in early 2016. Prior to this, an analysis of existing data from permanent monitors will be performed to prioritize which sub-basins should be further investigated via this temporary monitoring program. It is anticipated that this contract will be expanded to include additional Phases for additional monitoring, modeling, SSES and rehabilitation services. Phase 1 is detailed below. In addition, an on-call services task is included to cover permanent monitor analysis, modeling, SSES, condition assessment, risk reduction, asset management, prioritization, development review, rehabilitation, or related services for the sewer collection system required by the City to reduce the risk of sanitary sewer overflows (SSOs).

PHASE 1 SCOPE OF SERVICES

Task 1 – Kickoff meeting, Analysis of Existing Data and Identification of Basins for Temporary Monitoring

CDM Smith will develop a temporary flow monitoring plan to collect pertinent temporary flow and rainfall data for the City's highest I/I service areas. CDM Smith will make recommendations regarding flow monitor and rain gage locations, sub-basin size, and duration of flow monitoring. To accomplish this task, CDM Smith will review the City's historic permanent meter data, including wastewater plant influent flow data. This review will focus on (1) basins previously identified by ADS and the City as high priority, (2) basins identified by past hydraulic modeling as high priority for I/I reduction, and (3) areas of interest to the City where I/I reduction may be needed to accommodate future development. Once basins have been chosen, temporary meter locations, creating sub-basins, will be selected . The temporary meter sub- basin size is estimated to average 20,000 linear feet (lf) which is a reasonable size to perform comprehensive rehabilitation to reduce I/I. This scope of work assumes up to 10 new meter-events will be analyzed from the City's historic permanent meter data to assist in locating the new temporary meters.

CDM Smith will have a kickoff meeting with the City, to gather data and better understand the City's goals and desires. Additionally, a meeting will be held to review the results and recommendations of the analysis of existing data, in which final basins will be selected.

The Task 1 deliverable will be a letter-type report, outlining steps taken, results and recommendations.

Task 2 – Temporary Flow Monitoring Data Collection

CDM Smith intends to subcontract the field flow monitoring services to ADS Environmental Services. The flow monitoring equipment will be capable of measuring the depth and velocity of wastewater flows at synchronized time intervals of 15 minutes. Pressure sensors will be installed with the capability of measuring depth of surcharging at the monitoring locations. Rain gage locations will be determined with the assistance of the City as these are often placed at City-owned secure facilities such as pump stations or fire stations. The rain gage equipment shall be capable of measuring rainfall depth in increments of 0.01 inches at preset synchronized time intervals of 15 minutes. Flow and rainfall data shall be provided to City in digital spreadsheet-compatible format. Data shall include date, time, depth, and average velocity, and flow at not more than 15-minute increments. Site installation logs, detailing manhole location sketch, pipe sizes in and out of manhole and location of sensor, site hydraulics, approx. depth of flow & velocity, etc. will also be provided for each monitoring site.

CDM Smith will review the raw data from all temporary meters at the start date of the flow monitoring period to ensure that the flow monitor site hydraulics are conducive to collection of quality data and that the equipment is functioning properly. During the flow monitoring period, CDM Smith will also review data every other week thereafter to monitor any potential change in conditions.

While the exact location of the temporary monitors will be determined in Task 1, the estimate of 55 meters and up to10 rain gauges, for the purposes of generating a cost estimate, is based on the average sub-basin size of 20,000 lf and an assumption that the following basins will be analyzed: LCO, TF2, HRO & RMP (which are part of ENO/ENOP plus few additional monitors in ENO/ENOP) and DBO. Should the flow monitoring require a time extension for unforeseen circumstances such as lack of rainfall, additional weeks may be added to the contract, after execution of a contract amendment, at the following additional extended monitoring costs:

$296 per meter per week ($16,320 per week for 55 meters).

Task 3 –Analysis

CDM Smith will perform hydrograph decomposition to determine the rainfall dependent inflow and infiltration (RDI/I) contributions for three monitored storm events. Flow hydrographs recorded during a storm event will be decomposed into their wet weather and base flow components by subtracting the typical base flow hydrograph. R values (defined as the fraction of rainfall over a sewershed that enters the sanitary sewer as RDI/I), peaking factors, and RDI/I per linear foot of sewer will be evaluated. This analysis will reveal the relative RDI/I contributions of each temporary monitor basin to each other for prioritization of SSES and rehabilitation. The temporary flow monitor basins will be prioritized and recommendations and cost estimates developed for additional SSES investigation or rehabilitation work.

The deliverable for Task 3 is discussed in Task 5 below.

Task 4 – SSES Programmatic Services

This task will assist the City with their overall Gravity Sewer Evaluation Program and re-evaluate the current program approach. This will include up to 120 hours of assistance which may include meetings to discuss how to prioritize sub-basins; how to develop appropriate funding levels, options to gather/store/share pipe and manhole condition assessment data, consideration of alternative technologies; consideration of criticality of facilities and how to weave in condition assessment on critical facilities even if not I/I prone, working with City crews on work plan development for predictive CCTV, etc.

Task 5 – Project Management, Recommendations, and Report

CDM Smith will manage subcontractors, provide monthly invoices, and prepare a draft report to document the results of the analysis and recommendations for additional SSES or rehabilitation work in the priority basins. The report will include preliminary cost estimates for additional SSES, planning level cost estimates for rehabilitation, and a discussion of the types of SSES and rehabilitation considered and recommended.

The draft report will be presented and discussed at a meeting. After discussion and adequate review by City staff, comments will be sent back to CDM Smith, the report revised and the Final Draft presented at a follow-up meeting, before City acceptance. CDM Smith will then incorporate any final comments into a final report, if desired.

CDM Smith will maintain regular contact with the City's PM throughout the project via emails, phone calls, etc. as warranted.

Task 6 – Additional On-Call Programmatic Services and Monitoring

CDM Smith will perform on-call programmatic services as requested in writing by the City of Durham. This on-call services task is included to cover permanent monitor analysis, modeling, SSES topographic survey, condition assessment, risk reduction, asset management, prioritization, development review, rehabilitation, or related services for the sewer collection system required by the City to reduce the risk of SSOs. In addition, CDM Smith will train Durham staff at Durham's offices in the use of the SewerGEMS modeling software. This task includes a one-day training workshop and 16 hours of follow-up conference call or net meeting time to answer questions. The City will provide the required computers, software licenses, and training space. In the event that not enough rainfall data is gathered, this task also includes cost for up to 6 more weeks of monitoring of 55 sites at $296/Meter/week.

SCHEDULE

Task 1 will be completed within 75 days of NTP. Temporary flow monitors and rain gages will be installed between January 15 and February 15, 2016 to capture the high groundwater period, or within 30 days of acceptance of the Task 1 results (whichever is later). (Assuming that a notice to proceed is given by September 30, 2015, Task 1 is anticipated to be completed by December 15, 2015. Temporary flow monitors and rain gages are anticipated be in place no later than February 15, 2016.) It is anticipated that final flow metering data will be received within 4 weeks of the completion of the flow metering period. CDM Smith will complete Task 3 within 8 weeks of receipt of the data. The draft report will be

completed within 4 weeks of completion of Task 3. (Anticipated completion is therefore August 15, 2016 given the above dates and no schedule extensions.)

The City anticipates identifying, with the guidance of CDMS, additional basins, throughout the City service area, for conducting further Phases and similar tasks as outlined above, over a period of several years.

OWNER'S RESPONSIBILITIES

The responsibilities of OWNER as described in the Agreement are as follows:

- Provide the ENGINEER with all applicable GIS, flow monitoring and rain gage data, and plant data.
- Provide historical flow monitoring data as necessary
- Arrange for access to sites. This will include locating the manholes prior to meter installation as necessary.
- Aid in selection of flow monitor and rain gage sites
- Timely review and input of deliverables

METHOD OF PAYMENT

Invoices for lump sum Tasks 1-5 will be submitted monthly based on the percentage of work completed. The task budgets shown in Table 1 represent either a lump sum or not-to-exceed amount depending upon the task and are lump sum tasks. Tasks 1-5 will be performed for a lump sum fee of $530,700, that weekly flow monitoring extension prices shall be applicable if the flow monitoring requires a time extension for unforeseen circumstances (such as lack of rainfall). Any increase in the budget amounts shown for Tasks 1 – 6 must be made part of a written, executed amendment to the contract.

Table 1 – Estimated Distribution by Task:

Task No	Task Name	Payment Terms	Budget	Percent of Total
Task 1	Kickoff, Analysis of Existing Data and Basin Selection	Lump Sum	$61,000	9%
Task 2	Temporary Flow Monitoring Data Collection (1)	Lump Sum	$297,500	43%
Task 3	Analysis	Lump Sum	$103,500	15%

Task 4	SSES Programmatic Services	Lump Sum	$22,000	3%
Task 5	Project Management, Recommendations, & Report	Lump Sum	$46,700	7%
Task 6	Programmatic Services and Monitoring	Not to Exceed	$165,000	23%
Total of Tasks			**$695,700**	**100%**

(1) $296/meter/week, if extension is needed

Not to Exceed method of payment for Task 2 is defined as CDM Smith will only invoice for the number of meters and rain gages installed up to the estimated 55 meters/10 rain gages. Payment for Task 6 will be made on the basis of the number of unit-hours expended by the ENGINEER's employee's times the applicable hourly rate plus compensation for all direct expenses with a 10% mark-up; plus subcontractor expenses with a 10% mark-up. The payment for Task 6 services will not exceed $165,000. The total upper limit of this contract is therefore $695,700.

Invoices for Task 6 shall be submitted monthly and will include the number of man-hours of work performed by each billing rate category as well as non-labor related charges.